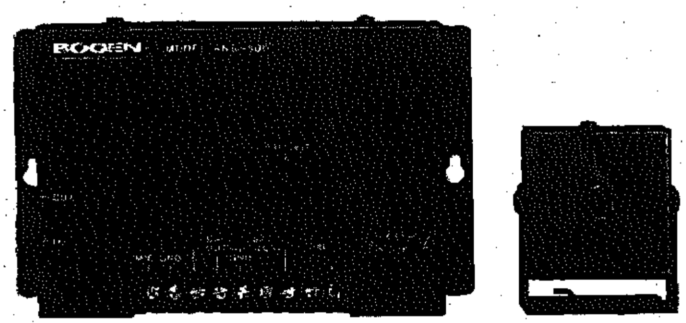
BOGEN

Ambient Noise Sensor

Model ANS-500 Control Unit
& ANS-500M Microphone Module



Installation & Operation Instructions

Part No. 54-5967-02
Printed in Korea 9512

Specifications

Connectors & Terminals

ANS Audio In and Out:	3-point terminal strip and RCA jacks.
Sensing Microphone:	2-point terminal strip
Power:	2-point terminal strip and power jack (center negative)

General

Automatic Level Range Gain:	0dB to 18dB
System Response Delay Time:	Approx. 1 or 25 seconds (jumper selected)
In/Out Audio Impedance:	Balanced 600 ohms, unbalanced Hi-Z
Power Source:	24VDC, 30mA from 110VAC. Model ANS-500PS supplied with control unit
Operating Temperature:	0 to 55° C
Dimensions:	4"D x 1-¼"H x 5-¾"W (control unit) ⅞"D x 2-⅛"H x 2"W (microphone)

Description

The Bogen Model ANS-500 Ambient Noise Sensor is designed to electronically adjust the input level of a page announcement in an area of a building where ambient noise levels are continuously changing. It ensures that page announcements are audible even during periods of high noise levels. When the signal is boosted, the frequency response is shaped so that speech articulation is more intelligible in the high noise area.

The ANS-500 control module monitors the ambient noise level through the use of ANS-500 microphone modules. Each microphone module includes an adjustable mounting base for precise positioning.

One microphone and one power supply are included with the ANS-500 product. Additional microphones may be purchased separately. The control unit is capable of supporting up to four (4) microphones wired in parallel; however, if the sound level increases in one area monitored by a microphone, the resulting page signal will be boosted in all areas supplied by the amplifier. Wire runs between the control unit and microphones consist of two-conductor AWG20, and can reach 2,000 feet with no appreciable loss of signal strength.

Installation Precautions

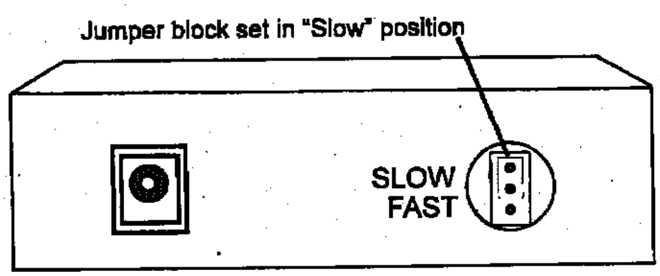
WARNING:

Do not apply power to the control unit until all connections have been made and double-checked.

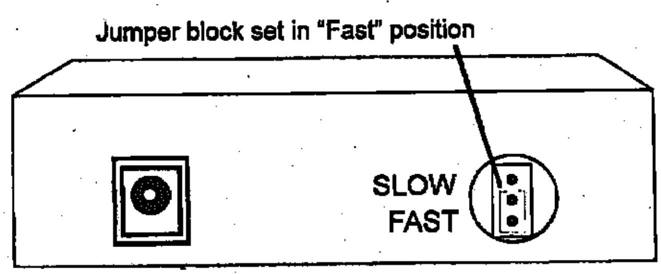
Read and understand all installation instructions before you install the ANS-500. It may be necessary to retap speakers at their highest level and/or replace the amplifier with a more powerful unit. Refer to the section titled Amplifier Connection for information.

Set System Response Delay Time

The ANS-500 is equipped with a jumper to set the system response delay time. The time can be set to "FAST" (approximately 1 second), or "SLOW" (approximately 25 seconds. To set the time, place the jumper block as shown below.



Note : The ANS-500 is shipped with the jumper in the "Slow" position.



Microphone Module Installation

Locate the microphone module(s) in an area central to the noise producing source. It can be mounted in a vertical or horizontal position.

The module should face the direction of the highest noise level source.

Make connections as shown in the wiring diagrams.

Amplifier Connection

WARNING:

Make all connections with the power off.

If the amplifier used with the ANS-500 is connected to the speaker system using the 70V or 25V output terminals, you should tap the loudspeakers for their highest power level. This will allow higher output without overdriving the transformer when the ANS-500 provides higher gain.

After tapping the speakers, calculate the total wattage required by adding the wattage of all speakers. If the total wattage exceeds the output wattage of the paging amplifier, you will need to replace the unit with an amplifier of sufficient power. The replacement amplifier should provide approximately 20% headroom to allow for future expansion and to extend the life of the amplifier.

Operation & Adjustment

1. Apply 24 VDC to the ANS-500 (Bogen Model ANS-500PS)
2. Turn SENSITIVITY control to full counter-clockwise position (min.)
3. Turn the amplifier power switch to the ON position.
3. With the background noise at its normal level, adjust the amplifier output for the desired level from speakers.
4. Turn on all noise producing equipment in the area of the microphone to achieve the maximum ambient noise level.
5. While making a page, slowly turn the SENSITIVITY control clockwise until the page is at the desired level above the noise.

WARNING:

IF YOU BOOST THE OUTPUT TOO MUCH, YOU WILL OVERDRIVE THE AMPLIFIER AND THE SIGNAL WILL BE DISTORTED. REFER TO THE PREVIOUS SECTION: AMPLIFIER CONNECTION.

Wiring Diagrams

Figure 1. ANS-500 with Bogen Gold Seal Series Amplifier or any Amplifier with IN/OUT Jacks.

Figure 2. ANS-500 and Bogen TPU-B Series amplifiers or any amplifier with balanced line input.

Figure 3. Two-amplifier setup. The Gold Seal Series amplifier with no ambient noise sensing and TPU-B Series amplifier. The TPU-B can replace any amplifier with Music, Aux or Line input.

Figure 4. Two-zone setup. The C-Series amplifiers or any amplifiers with balanced line inputs.

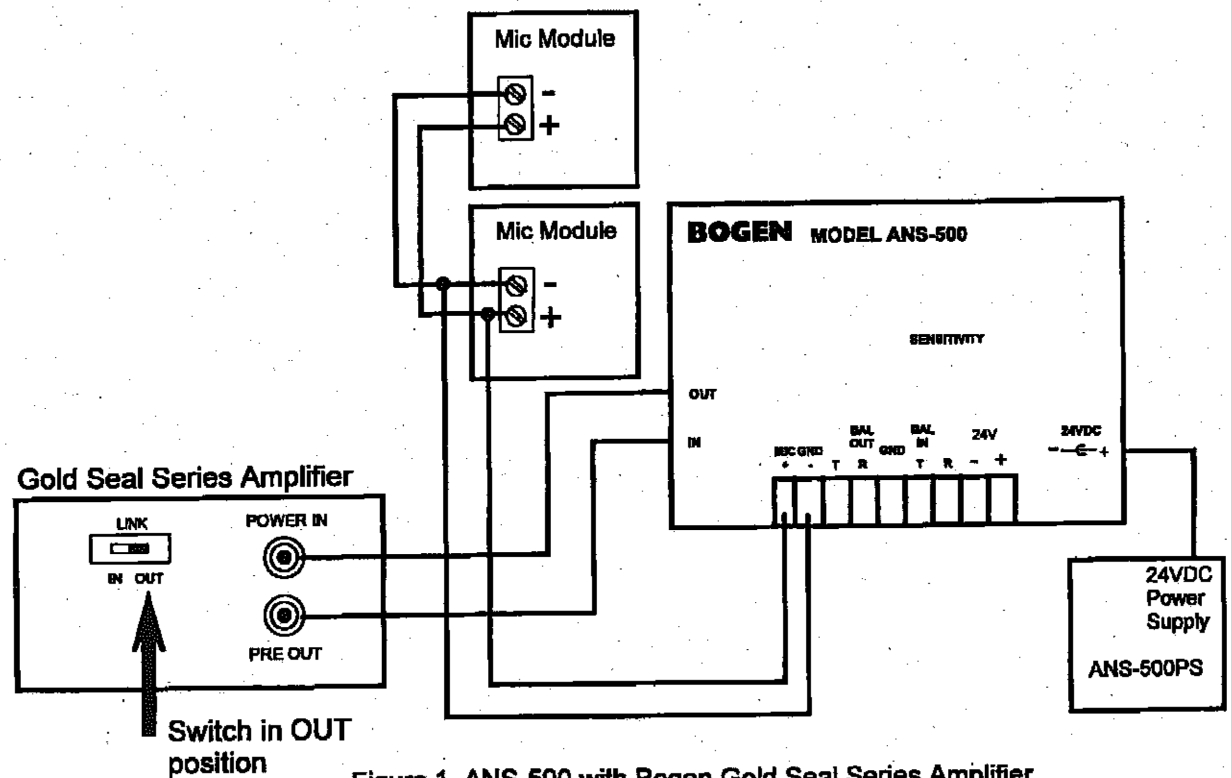


Figure 1. ANS-500 with Bogen Gold Seal Series Amplifier or any Amplifier with IN/OUT Jacks.

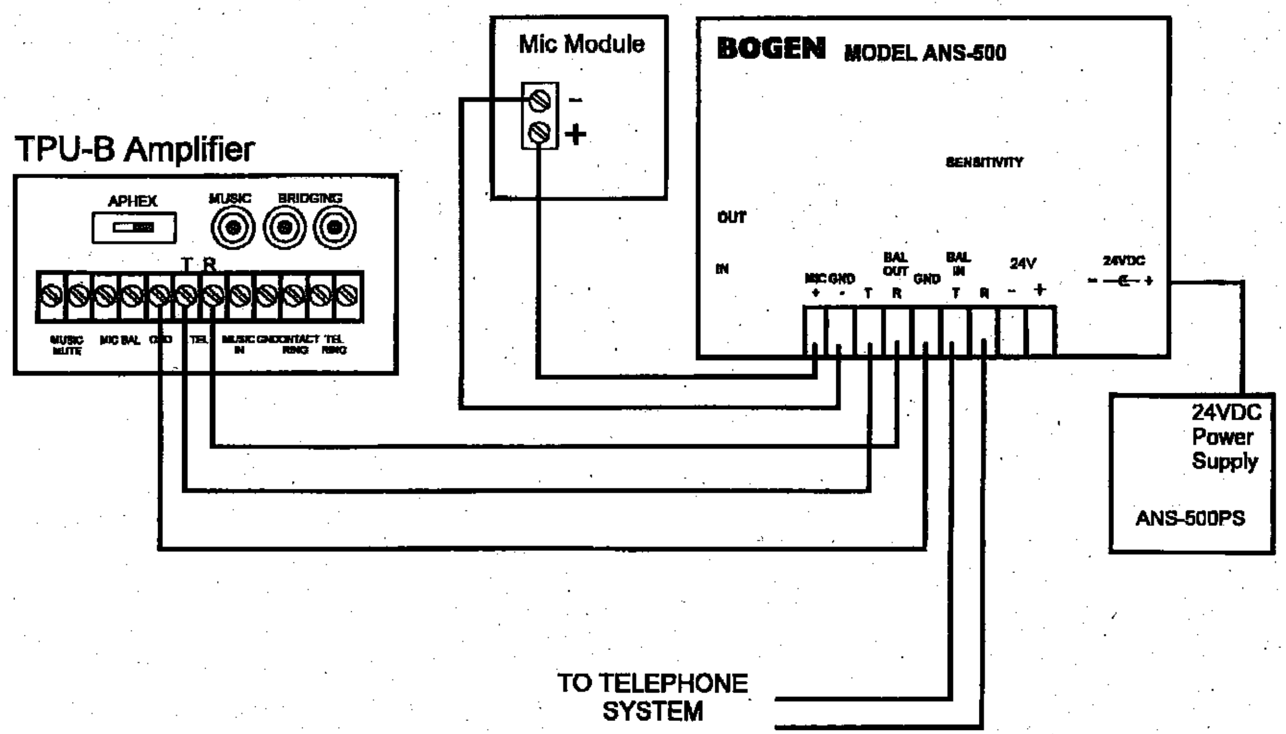


Figure 2. ANS-500 with Bogen TPU-B Series Amplifier or any Amplifier with Balanced Telephone Line Input.

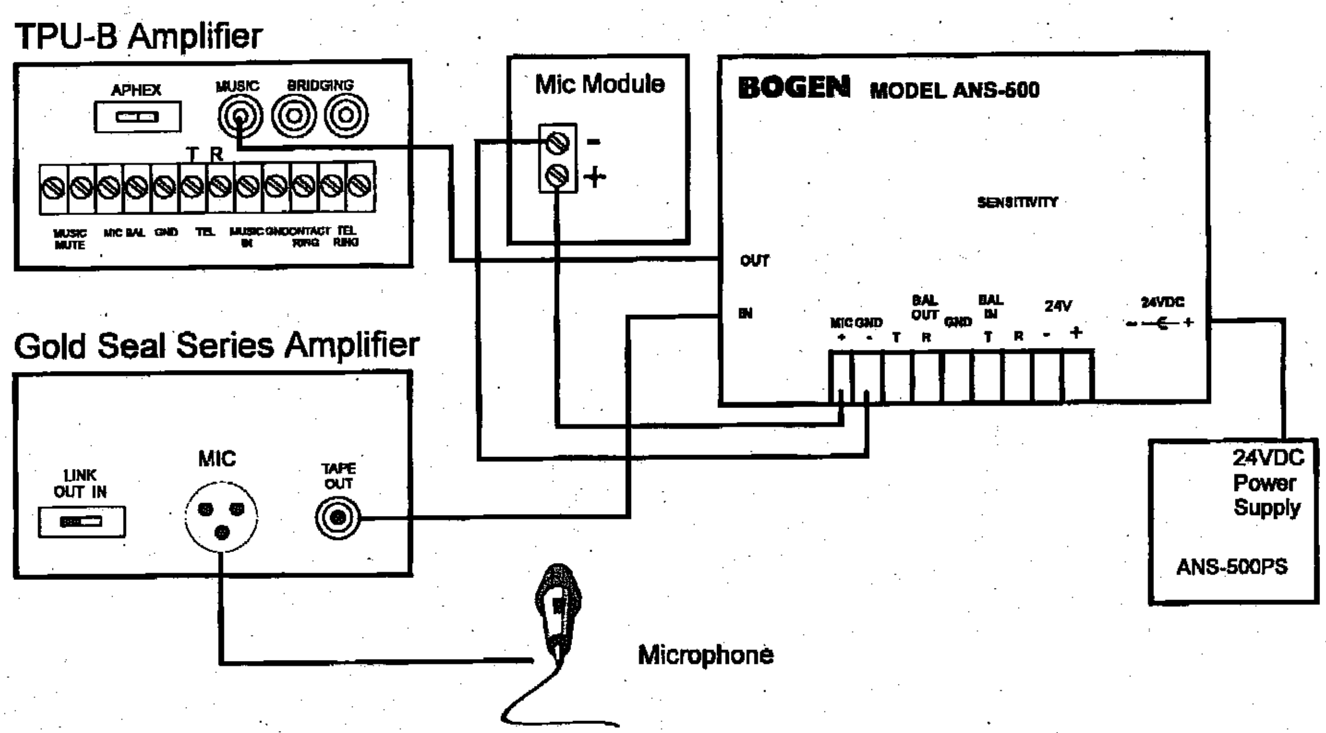


Figure 3. Two-Amplifier Setup; The Gold Seal Amplifier with no Ambient Noise Sensing and the TPU-B Series Amplifier. The TPU-B can Replace any Amplifier with Music, Aux or Line Input.

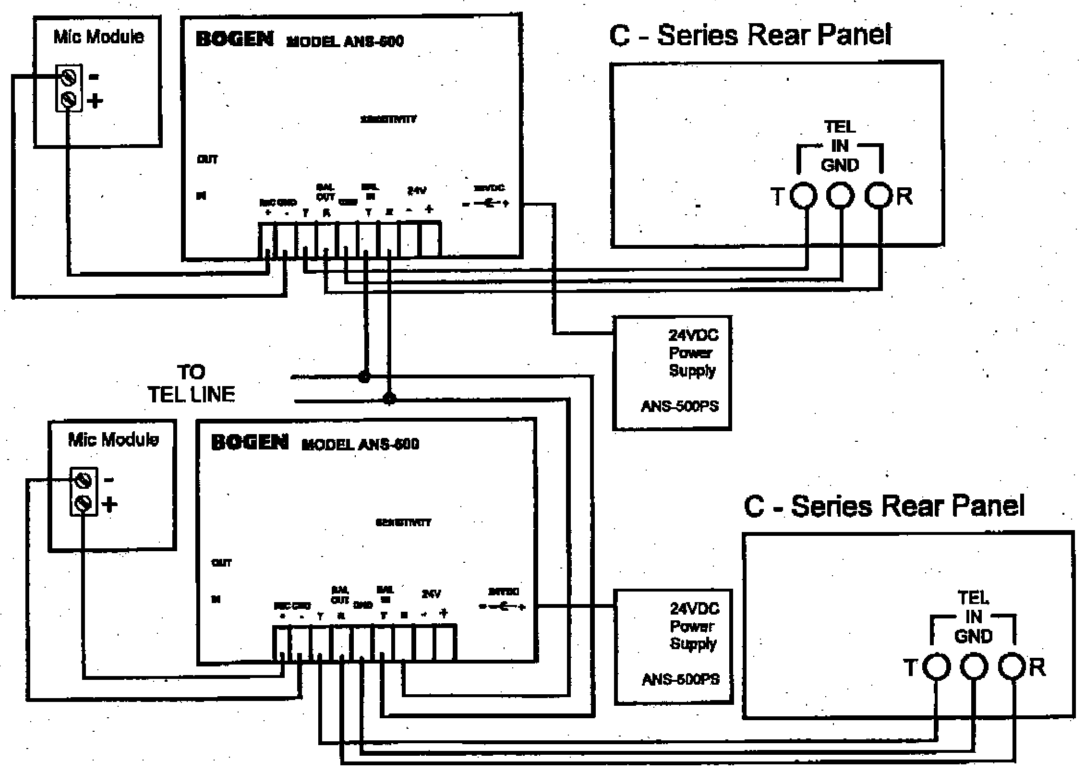


Figure 4. Two-Zone Setup. The C-Series Amplifiers or any Amplifiers with Balanced Line Inputs.

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